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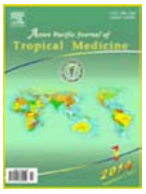

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Identification of medicinal plants affecting on headaches and migraines in Lorestan Province, West of Iran

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ABSTRACT

Objective: To identify medicinal plants witch are used for headaches and migraines treatment in Lorestan province of Iran.

Methods: Traditional medical herbs information was acquired from indigenous people with the cooperation of health centers of Doroud, Borujerd, Khorramabad, Aleshtar Poldokhtar, Aligoodarz, Nourabad and Kouhdasht cities. The prepared questionnaires were given to trained health volunteers. They attended in the villages and recorded people beliefs in herbal therapy by the questionnaires.

Results: The results of this study showed that people used 15 herbs traditionally to treat headaches. Because of the importance of the medicinal plants in the study area, it is neccessary to determine sociological studies the plenty of plant species.

Conclusions: Because of the widespread use of traditional medicinal plants and high tendency to herbal medicine and traditional medicine, more extensive researches should be designed in several areas of pharmacy and pharmacology of medicinal plants to prepare proper information for pharmaceutical industries.

1. Introduction

Pain is the most common phenomena that force people to seek help from the health care system. Pain will affect various aspects of life, and not only caused stress and discomfort, but due to other stressors of individuals, such as treatment costs[1].

In most epidemiological studies, headache symptoms are common with high frequency and different reasons such as tension or migraine. Headache is one of the ten most common causes for consultation with a doctor[2,3].

Chronic tension-type headache is characterized by frequent attacks, often daily, non-pulsatile and bilateral pain behind the head without nausea, vomiting or visual disturbances. Pain is described as a tight band wrapped in head.

Migraine type headache is characterized by unilateral location, and pulsating quality with nausea, sensitivity to light and fatigue that will last for 7-4 h[4,5]. Migraine headache is the most common mental disorders with 12% prevalence in some studies[6,7].

Stress, anxiety, assessment and response to small changes are important factors affecting the incidence of migraine[8,9].Headache is one of the most prevalent complaints. Reports show 90% of people have a headache at least once a year[10,11]. Lorestan is one of the green provinces in the West of Iran which is located along the Zagros Mountains with unspoiled nature and rich plant

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flora. In this province, 151 native medicinal plants have been identified witch used to treat a variety of diseases, traditionally[12]. This study was carried out to identify medicinal plants to treat headaches in this region.

2. Materials and methods

2.1. Studied region

Lorestan province is located in the west of Iran between 66° 51′-50° 3′ east longitude from the Greenwich meridian and 32° 37′-34° 22′ north latitude from the equator. This province has 4 different climates (semiarid, mild semi-humid, cold semi-humid and heights climate). The area of the Lorestan province is 28 300 ha.

Its minimum altitude is 330 m in the Zal Bridge and the maximum altitude is 4 050 m in the Oshtorankooh. This province has variable climate and this variety is completely obvious from north east to south west. Lorestan adjoins Hamedan and Markazi provinces in the north, and adjoins Isfahan in the east, Khuzestan in the south and Kermanshah and Ilam provinces in the west.

2.2. Methodology and plant collection

Traditional remedial information of this study were obtained at 2007 to 2011, through interview and questionnaire and in cooperation with the Lorestan planning and management organization, Technology and Research Assistance of Lorestan Medical Sciences and benefiting indigenous information of people in provincial cities and also through cooperation of the treatment and health network in Doroud, Borujerd, Khoramabad, Aleshter, Pole Dokhtar, Aligudarz, Nourabad, and Kouhdasht cities in Lorestan province.

Questionnaires that had already been prepared by the directors of the health care system and were given to trained health volunteers. The questionnaire includes information about the location, characteristics of interviewer, native name and used parts of plant, mode of consumption, growing season and type of plants. Forms were completed by trained liaisons in the villages by asking old villagers. All information were recorded in tables.

3. Results

Fifteen medicinal plants described in ethnobotany study in Lorestan province have therapeutic effect against headache. Complete information of studied plants is listed in Table 1. Ethnobotanical information of these herbs included scientific name, family, local name, persian name, used parts of plant, using method and collection season.

Table 1
The ethnobotanical information of fifteen medicinal plants.

Scientific name	Family	Local name	Persian name	Used part of plant	Using method	Collection season	Application
Echeveria elegans	Crassulaceae	Pinome	Sagh	Seed	Herbal tea	Spring	Headache
Alhagi persarum	Fabaceae	Hashtarkhar	Khar shotor	Root	Herbal tea	Spring	Headache
Allium haemanthoides	Liliaceae	Ben sor	Piyaz yazdi	Leaves, tubers	Herbal tea	Spring, summer	Headache
Althaea officinalis	Malvaceae	Gole hiru	Khatmi	Flower, seed	Herbal tea	Spring, early summer	Headache
Anchusa italica	Boraginaceae	Gole gazo	Gaw Zaban	Flower, seed, root	Herbal tea	Spring, summer	Headache
Artemisia annua	Asteraceae	Khers dari	Darmaneh	Flower, stem	Herbal tea	All seasons	Headache
Cichorium intybus	Asteraceae	Cheghcheghe	Kasni	Root	Root decoction	All seasons	Headache
Daphne mucronata	Thymelaeaceae	Tolik	Mazarion	Bark , leaf	Roots incense leaves decoction	All seasons	Headache
Falcaria vulgaris	Apiaceae	Paghazou	Ghaziaghi	Leaf, flower, stem	The daily consumption of a cup of decoction	Spring, winter	Headache
Ferula angulata	Umbelliferae	Chavir	–	Flower, stem	Decoction	Spring, summer	Headache
Matricaria recutita	Compositae	Gole bayeneh	Babooneh	Petal	Herbal tea	Spring	Migraine
Paliurus spina	Rhamnaceae	Sipa	–	Leaf, stem	Decoction	Summer	Migraine
Papaver rhoeasa	Papaveraceae	Khashkhash	Khashkhash	Sap	Sap collection, drying and mixed with water and drink tea	Spring	Migraine
Violo tricolor	Umbelliferae	Gole banoushe	Banafsheh	Flower, branches	Herbal tea	Spring	Headache Migraine
Ziziphus jujuba	Rhamnaceae	Ano	Annab	Fruit, shell, core	Herbal tea	Autumn	Headache

4. Discussion

For pain relief several chemical and synthetic drugs are supplied in pharmaceutical market with different side effects[13]. Side effects of medicinal plants are minimal. Comparison of this ethnobotanical study with other parts of Iran shows medicinal plants used for several purposes in Iranian traditional medicine.

Chicory (*Cichorium intybus*) has been named as a nerve tonic in Arasbaran. Chamomile (*Anthemis nobilis*) is used as an anti-inflammatory and anticonvulsant and oriental poppy (*Papaver orientale*) is used as an analgesic and hypnotic in this area of Iran[14].

Camel thorn (*Alhagi*) is used for wound healing, kidney and bladder stones, hemorrhoids, jaundice in Sistan province and Jujube (*Zizyphus jujuba*) is used as laxative, respiraory diseases, kidney and bladder pain, blood purifier, for constipation in this area[15].

Chamomile (*Anthemis austro-iranica*) is used to relieve cold natured and strengthens the heart in Kazeroon city. In this area Chicory (*Cichorium intybus* L.) is used as blood purifier to strengthen the stomach, and marshmallow (*Alcea aucheri* (Boiss.) Alef.) is used to prevent hair loss and laxatives, and camel thorn (*Alhagi*) is used for treatment of kidney stones[16].

Armenian marshmallow (*Alcea aucheri* Boiss.) is used for sore throat in Cheshmeh Anjir region of Shiraz, and Alborzi poppy (*Papaver tennifolium* Boiss and Hohen ex Boiss.) is used as ecstasy and sedative[17].

In Kerman, South marshmallow (*Alcea aucheri*) is used for treatment of colds and allergies, and used as laxative. Sagebrush (*Artemisia aucheri*) used as fever reliever, abdominal pain relievers and relieve weakness of body. Chicory plants used for removing heat stroke, liver failure and treatment of jaundice. Beef tongue (*Echium amoenum*) is used as a sedative and hypnotic. Jujube (*Ziziphus jujuba*) is used for cold treatment and is beneficial to improving the hot-tempered and used as laxative[18].

Identification of various medicinal plants in different nations associated with study on their therapeutic and pharmaceutical effects have opened a new window for treatment of many diseases by researchers. Many species of medicinal plants are still unknown in the world used for treatment by indigenous people. Such information is orally transmitted between different ethnic groups from one generation to the next around the world, which can be gradually extinct in modern societies. First step to extract useful hidden information in such societies provides a detailed list of medicinal plants, uses and how to use these plants[19-33].

Nowadays, use of natural and herbal medicines has become increasingly common and expanding in most countries of the world which has led to extensive studies in the medical literature regarding the identification of medicinal plants. As a result, new resources have been introduced to produce useful drugs that have fewer side effects than synthetic drugs[26].

Regarding the importance of the medicinal plants in the study area, it seems that sociological studies should investigate the frequency of plant species. Because of the widespread traditional use of medicinal plants and traditional medicine, much more extensive researches in various fields of pharmacy and pharmacology of medicinal plants are needed in this region. Researches will determine proper using methods of medicinal plants for personal and industrial policies through this valuable botanical information.

Conflict of interest statement

We declare that we have no conflict of interest.

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